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Inversio Uteri.

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In considering the diseases to which the human frame is subject; there are none, which create so great a degree of anxious solicitude and distress in the mind of the patient, as those of the generative organs. Any affection of these organs, not only, operate on the superstitious and the weak minded; but the firmest mind and the stoutest heart, are made to apprehend alarming and fatal consequences. The diseases of the sexual organs of females, are so complicated, and difficult to cure; and there are so many obstacles to encounter in arriving at their seat and nature, that the young practitioner is almost constrained to abandon his pursuit of this branch of Medical Science. An other imposing barrier presents itself in the investigation of the causes of those diseases which are peculiar to females, viz, the imperfect history the patient gives of the case, owing to that modesty and delicacy of feeling, which ever characterize

the seat. The prominent symptoms are only mentioned, and not these till the disease has so intimately blended itself with other organs, beside those primarily affected, that it is difficult to distinguish it from the sympathetic affections. Hence the Accoucheur has numerous difficulties to encounter in arriving at correct conclusions in the practice of his profession. In the present improved state of obstetrical knowledge, these obstacles are in a great measure obviated by the light which has been thrown on this branch of medicine, so that, it has become an enlightened science, and can no longer be branded as mere Quackery, and as belonging to the province and dignity of ignorant midwives.

In the investigation of that distressing and terrible misfortune, the Inversion of the Uterus, which sometimes befall women after labour; it will be important

to treat of the anatomy and some of the functions of this organ, that it may be more explicit and perspicuous. This disease must have had its origin in former times, as, we have no reason to suppose it to be of recent date, and must attribute its being unnoticed by most of the old writers, to their imperfect knowledge, and their not understanding the nature of the disease. It is more than probable, it was more frequent in those days than at the present period, because, it is now principally attributed to the unskilful manipulations of the midwife in delivering the placenta. The present improved state of obstetrical science, places it greatly in the power of the accoucheur to obviate this often fatal malady. In the anatomical description of this organ, it will be unnecessary for the present purpose to pursue it, through all its minute ramifications.

The Uterus is that important, vascular and membranous viscus, destined for the reception of the impregnated ovum shortly after conception, till the period of parturition. It is situated in the pelvic cavity, intervening between the bladder in front and the rectum behind. To each of which it is attached by cellular substance and reflected peritoneum. In shape it resembles a flattened pear, the stem being attached, represents the vagina to the upper part of which is connected the inferior and smaller portion of the uterus which terminates in two little protuberances called ostiucae. The substance of the uterus has long been a contested point among writers of Anatomy and Physiology. Some maintain the position of its muscularity, while others with equal confidence, assert that it possesses a structure, sui generis. It can be no longer doubted as to its muscularity, for its muscular fibres have been seen

and dissected by Bell and other anatomists. She must also be led to the same conclusion, when we consider its laws and functions, as being analagous to other muscular tissues. The whole phenomena of the uterus during parturition, the expelling of its contents in abortion, together with its other actions, tend to prove that it consists of muscular fibres. The uterus has usually been divided, merely for the purpose of giving it a better description, being considered as only an arbitrary division not distinct in its actions, 1st into the fundus which consists of all the upper portion above the insertion of the fallopian tubes, the body includes the space between the neck and the fundus, and the neck is all the remaining part being the inferior and smaller and terminating in the os tincae. This division which has been considered only arbitrary, is nevertheless distinct and independant, according

to the laws of the different actions of each particular part. For the explanation of this mode of action, we are indebted to the investigations of Dr. Dewees,[1] in his essay on the means of lessening Pain, and facilitating certain cases of difficult Labour. Were we to draw our deductions from these divisions of the uterus acting synchronously and having a similar action, we might be led to conclude that their actions are not distinct and independent of each other. But on farther observation we find that the fundus, body and neck each have an independent and separate power, and obey their own peculiar laws. This is a necessary principle for the explanation of the phenomena exhibited in utero gestation, parturition and in diseases attaching this viscus. In the first months of pregnancy to the seventh, the fundus and body suffer

distention to a great extent, while the neck remains nearly the same as before impregnation not being attered by their dilitation. In the latter months of pregnancy from the seventh to the ninth, an other action takes place, the neck during this period is made to dilate, while the fundus and body experience little or no change; and in the last month of utero-gestation, the neck and os uteri fully expand themselves.

Hence; each of these parts into which this viscus has been divided, manifests a separate and independent power in their nature, they exhibit different phenomena, and also a state of contraction and dilitation at the same time.

The appendages of this important organ of generation, are the fallopian tubes, the ovaria, the ligamenta lata and the round ligaments, these latter are supposed by some to be destined to maintain this viscus in its proper situation: when we examine however into the anatomy of these parts, we find them ill fitted for this

purpose. Having considered the unimpregnated uterus, it will be necessary to enter into a cursory detail of the gravid uterus at full time. When we compare these two different states, there will be found a vast difference as to the magnitude. After this organ has become impregnated, a gradual enlargement of its size takes place, this is carried on with a considerable degree of exactness, but, there is not a regular increase of size at equal intervals of time, it being greater at one period than at an other. The vessels become enlarged, being derived from the Spermatic and Hypogastric arteries, forming anastamosing branches with each other from above and below; the veins are also enlarged with which it is supplied, and the distribution of its numerous nerves, becomes more apparent; in fine, there is a development as to size of all its parts. At the full period of utero gestation, the broad and round ligaments, as also the fallopian tubes and ovaria, assume a different situation to what they were previous

to this period. The broad ligaments being only a reflection of the peritoneum from the sides of the uterus, now spread themselves out on the distended surface, so that their duplicatures are unfolded, and enclose in their doublings the ovaria, fallopian tubes and round ligaments, binding them down on the surface of the distended uterus, so that they no longer remain loose and floating in the pelvic cavity. The uterus at the full period of gestation, makes an effort to expel its contents, and this is accomplished by a part of it being in a state of relaxation, while an other portion contracts. The neck and os uteri must be in a state of atony, while the fundus and body contract, that the foetus may be expelled. Now it must be evident that any undue action of these different parts predisposes to the derangement of this viscus at the time of parturition or after delivery. When this unnatural state of things exists, an Inversion of the Uterus may be readily induced.

It consists as the term implies of the inside being turned out, forming as it were, the external covering of a large tumour, and its outside becomes the internal lining surface of the cavity which is formed by this tumour. In short it is a complete turning, the fundus most generally becomes the pendant part, while the os uteri and neck remain mounted above.

There are different degrees of the inversion of the uterus, and these may be termed the depressed or concealed, the incomplete and the complete. In the depressed state the fundus protrudes itself into the uterine cavity without passing through the os internum, but an inversion of the part takes place. Where an incomplete inversion is induced, the fundus passes through the os uteri, and remains concealed in the vagina, this however is not necessarily the case, as it may appear through the os externum. The depressed condition may come under the head of the incomplete, but as different

phenomena are exhibited, they may be considered separate. The compleete inversion consists of the uterus being entirely turned inside out to the mouth itself and in some instances the upper part of the vagina is inverted, so that the whole of the uterus passes inverted through the os internum, generally appearing without the vulva, but sometimes it does not protrude through these parts.
The symptoms attending this often fatal accident are severe; an obtuse pain in the region of the uterus, accompanied with a bearing down effort, which the patient compares to labour pains, and often renders an incomplete inversion compleete. The countenance is pale, although much haemorrhage may not ensue, which is often profuse depending in a great measure on the degree of inversion. The haemorrhage is much greater in partial than in complete inversion, being in this last often slight.
The pulse is frequent, rapid and very feeble,

sometimes extinct, faintings and convulsions are usual attendants, at times violent nervous affections ensue, and sudden death sometimes closes the scene. Nausea and vomiting are not unfrequent, also a dragging sensation about the stomach, as if the intestines were pulled down. When the above symptoms occur an inversion may be strongly suspected. The chronic state is sometimes confounded with procidentia uteri, but on examination per vaginam in this latter disease, the neck and mouth of the uterus will be found presenting themselves to the finger when passed up into the vagina, whereas in inversion the fundus will first present itself. It is also nearly allied to polypus of the uterus, but it may be distinguished by the circumstances attending the two cases, as well as, the polypus being felt surrounded by the lining surface of the cavity of the uterus, also by scratching the uterus which will be sensibly felt in the part,

whereas the polypus possesses little or no sensibility. The diagnostic signs together with an examination of the condition of this organ, will readily point out the nature of the disease. On an examination per vaginam, there will be found a firm resisting tumour presenting itself, being similar to the child's head, as it has been pulled away with the crotchet being mistaken for the head. It may present as far as the os internum within the uterine cavity, or it has passed the os uteri down into the vagina, and sometimes appearing without the vulva between the legs of the patient; so that the length and size of the tumour depends upon the degree of inversion that has taken place. In these examinations also there will be an absence of the hard tumour in the hypogastric region, caused by the contraction of the uterus after delivery. The causes of this derangement have been generally ascribed to the too great force being used in delivering the

placenta after parturition has taken place. Parturient women are most frequently the unfortunate sufferers in this disease, yet it may occur in women not pregnant, as in polupus of the uterus of considerable size, and its being attached to the fundus, the uterus being thus affected and in a relaxed condition may from its weight produce an inversion; and also whatever enlarges the uterine cavity, as blood or other fluid may produce a similar effect. For this derangement to take place other circumstances must prevail, besides the force that is necessary for the detachment of the placenta from its connection with the parietes of the uterus. It is well known that the expelling of the foetus depends principally upon the contraction of the uterus, and this expulsion is effected chiefly by the action of the longitudinal fibres; this is called the spasmodic or alternate contraction. The uterus restores itself to its natural condition by the silent or insensible contraction of all the fibres, this is denominated the tonic contraction. When this latter

is disordered or an atony of the uterus prevails, an inversion is more apt to ensue, so that this derangement depends in a great measure upon this healthy contraction of this organ. It must then be evident under these circumstances, that it requires very little force applied to the umbilical cord in detaching the placenta to produce this distressing disease. It is also influenced by the peculiar attachment of the placenta; being facilitated, when attached to the fundus. The weight of the placenta thus attached and atony existing, may produce an inversion and in this case the fundus will protrude without the placenta being separated. Even the pressure of the intestines together with the action of the abdominal muscles, when there is contraction of the fundus, the body and neck being in a relaxed condition, may cause an inversion, and this is most probable in those cases which have taken place several days after delivery. The important practical deduction may be

drawn from these circumstances, that great force should not be employed in removing the placenta from its adhesions, and if there be haemorrhage and the hard tumour is not found in the hypogastric region; there should be strong apprehensions that this derangement might follow or had already occurred. Hence it is of the greatest importance to produce the tonic contraction after the delivery of the foetus by friction on the abdomen or some internal remedy, as the ergot &c, before an attempt is made to detach the placenta; and even after its expulsion, an examination should be made, to ascertain the condition of the parts; as death occurs more frequently than is generally supposed from the convulsions that are induced by the haemorrhage which follows an inversion. In this manner we may account for those sudden deaths which have happened after delivery without the true cause being suspected at the time. The prognosis of this disease is very precarious, as it may terminate

in a variety of ways. Although the symptoms at first, may be apparently favourable; yet it may prove suddenly fatal by profuse haemorrhage or other violent consequences. Or alarming convulsions and faintings may come on, or great nervous affections may arise from the uterus contracting on the protruded part, and hence causing constriction or strangulation of the uterus. These violent symptoms may subside; but a constant mucous discharge may be kept up, also at intervals, haemorrhage may follow, and as these are apt to continue for a length of time, hectic fever comes on and the system finally becomes exhausted by this continual drain, so that the patient sinks in a miserable manner.

It has been asserted, that after an inversion has remained for several years, a spontaneous restoration of the viscera to its proper situation may take place; this is explained by the tubes and ligaments drawing it up. Baudelocque the younger relates a case of eight years standing,

which terminated in this manner. This, if possible, must be of very rare occurrence. There is also a partial recovery which is sometimes effected by the powers of nature; in this the general symptoms disappear and the uterus is almost reduced to its proper size, but not placed in situ, so that the patient is permitted to enjoy tolerable health. Most of the writers on this subject, have recorded cases of this kind. In this partial recovery it has been supposed that conception might take place and produce a reinversion; but from the nature of the case this must be deemed impossible, for although an ovum may become impregnated, yet it must perish for the want of a proper nidus. In instances of this kind the uterus performs some of its natural functions as menstruation &c. The indications in the batment are exceedingly simple, but not so easily accomplished. In the first place, our attention must be directed to the restoration of the protruded part, in the second

to the prevention of the recurrence of the same thing after reinversion, and lastly where this cannot be effected by any means in our power we should endeavour to preserve life by removing violent symptoms and palliate the nature of the disease; and when there is constriction or strangulation by the contraction of the mouth of the uterus on the protruded portion, we should complete the inversion.

As there are different degrees of inversion, the complete and incomplete and under this last may be comprehended the depressed or concealed, it will be proper to speak of their treatment under different heads. In an incomplete inversion of recent occurrence and where constriction or strangulation has not taken place, there will be generally no great difficulty in the restoration of the part; but in a case of some hours or days standing it may be considered in most instances impracticable. The confessions of Hunter, Ford and Denman,

tend to prove that this cannot be effected, as they never succeeded in a single instance, even where only four hours had elapsed after the accident. This is also confirmed by Burns and most other writers on this subject, who say it is impossible to succeed in a chronic case. In cases, where the fundus is contained in the uterine cavity; but having reached so far as the os internum, the hand must be passed into its mouth, if it is sufficiently relaxed, and the fundus gently forced up to its proper situation. The hand must remain until the uterus manifests a disposition to contract; when this takes place it is to be withdrawn. If the placenta be attached, it may be removed if not adhering too generally, when an attempt is made at reduction; but, if strong attachment exists, we should first place the uterus in situ, and then wait till contraction manifests itself, it may then be removed at the time the hand is within the uterus.

If the mouth of the uterus will not admit the hand to pass into its cavity, it has been recommended to use a probe with its end being rounded off and of a suitable size; in its application however, great care should be observed. If the fundus has passed the os internum into the vagina, or has escaped without the vulva forming a large tumour, this is first to be compressed with the hand so as to diminish its size, and then to be passed into the vagina, when the most prominent part is to be gently pressed with the ends of the fingers in the direction of the axis of the uterus, till it passes the os uteri into its proper situation, and there to be retained till the uterus manifests a disposition to contract, the hand may then be retracted. If under this form, the placenta is not detached, we must then be directed by the existing circumstances for its delivery. but as a general rule, it is first to be carried up along with the uterus

before its detachment, and then to be treated as a retained placenta. There are cases however in which it may be found impossible to produce reinversion, when it will be proper first to separate the after-birth, and then endeavour to replace the uterus as above. There is a constricted state of the uterus in which it is found impossible to reinvert the part, owing to the mouth of the uterus contracting so firmly on the part. Under this circumstance it is recommended by my experienced preceptor Dr. Dewees, to complete the inversion, after unsuccessful attempts have been made to replace the parts. We are justified in so doing from the conviction that the life of the patient is thus preserved, as under existing circumstances, death must inevitably result. Although we do not expect after thus completing the inversion, to succeed in replacing the uterus; yet we deem it proper to relieve urgent symptoms;

and not to suffer the patient to die before our eyes by profuse haemorrhage, violent pains, faintings and convulsions, for it is generally admitted that these alarming and fatal symptoms do not attend complete inversion.
Under this view of the subject, it must be considered as the proper course to be pursued, although it subjects the patient to inversion of the uterus the remainder of life; still she may enjoy tolerable health under this derangement. Were we to adopt the opinion of some writers, that a spontaneous reinversion of the uterus, may take place by the powers of nature, there could not be the least objection to this mode of proceeding.
In every instance we must allay pain by anodynes, cordials &c, and also support the system by tonics, and calm the sufferings of the patient by suitable remedies. In the treatment of a complete inversion, we can only alleviate the distressing symptoms, as we

believe all our attempts at reinversion would prove unavailing. But proper attention should be paid to the subduing the more distressing symptoms, as syncope, retention of urine, inflammation &c. The attempt should however always be made to replace the part previous to the employment of palliative means. No undue force however should be employed, nor should our endeavours be persisted in for any length of time, as by these means violent inflammation is apt to be induced and other fatal consequences. In support of this position we have the authority of Dr. Dewees, who met with a case of this kind where his efforts at reinversion, proved unsuccessful. He also mantains that it is impracticable, owing to the mouth of the uterus contracting so firmly that the protruded portion cannot be restored. Although it is affirmed by Ruysch, Harvey and White, that it proved successful in their hands; yet we

are disposed to believe that there were mistakes made as to the degree of inversion. Complete inversion has been considered by many to consist of a portion of the uterus making its appearance without the vulva, this however is not a diagnostic sign of this state of the uterus, as it may take place in the incomplete. Hence may arise the erroneous opinions of those who contend that a incomplete inversion may be restored to its proper situation by proper manipulations. In Mr. White's case if we were to determine the degree of inversion by the symptoms related by him, viz. "profuse haemorrhage, great pain, convulsions and the pulse extinct in both arms" from these we should readily conclude that it was not a case of complete inversion. The symptoms attending his case were the very opposite of those of complete inversion, being generally but little haemorrhage, and none of those alarming symptoms as in the above case.

This is affirmed by Hamilton, Burns and others. It is now generally admitted that in chronic cases we can seldom or never accomplish our attempts at reinversion. May we not reasonably conclude that in instances of this kind, they were those of complete inversion, and we are also induced to believe that in most instances where there is an abatement of those violent symptoms attending a partial inversion, this is rendered complete by the efforts of nature. We are led to the same conclusion from the fact, that the bearing down effort resembling labour pains often renders an incomplete inversion complete, for the system of the patient is not able to bear those violent symptoms and thus to relieve itself, a complete inversion is induced. Hence it must be evident that most of those instances of partial recovery, where the uterus was restored nearly to its usual size but inverted were those of complete

inversion, and that all our efforts at replacing this kind of derangement, will prove unavailing. In cases of this kind of long standing where from the size of the tumour, the patient is very much annoyed, and there is schirrous or gangrenous affections of the uterus, it may be deemed proper to extirpate this organ. Several cases are on record in which this operation resulted favourably. Hunter, Clarke and Newnham have related cases where this viscus has been cut off with success. The operation is performed by a ligature being drawn firmly around the upper portion of the tumour and occasionally tightened until it is made to drop off. In the extirpation of this viscus, the fallopian tubes, the ovaria and round ligaments, are also generally taken off with it, as they are for the most part contained in the cavity which is formed by the

inverted uterus. How far these views of the subject under consideration, will comport with the enlightened opinions of the present improved state of obstetrical knowledge, we are not to conjecture, but leave it for others to decide.

For Dr. Dewees